



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,399	01/23/2004	Joseph Frank Loprete	20711-0036	9501
26587	7590	07/17/2006	EXAMINER	
MCNEES, WALLACE & NURICK LLC 100 PINE STREET P.O. BOX 1166 HARRISBURG, PA 17108-1166			BANKHEAD, GENE LOUIS	
			ART UNIT	PAPER NUMBER
			3744	

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/764,399	<b>Applicant(s)</b> LOPRETE, JOSEPH FRANK	
	<b>Examiner</b> Gene L. Bankhead	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 24 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-9 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 10, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation, "predetermined operating conditions". There is no previous mention to a "predetermined operating conditions" in claims 1,5, or 6, from which claim 7 depend. Therefore it is not clear as to what constitutes this limitation.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1,2,5,6, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alsenz (5035119) in view of Alsenz (US4951475).

With regard to claims 1,2,5, and 6 Alsenz '119 discloses a refrigeration system comprising two compressors 218 and 220; a condenser 216; and two evaporators 214 and 215 in fluid connection with the compressors (see Figure 1).

Application/Control Number: 10/764,399

Art Unit: 3744

Alsenz '119 further teaches a control system 200 and 221 capable of controlling the two compressors capacity selection (column 16 lines 63-68). Alsenz '119 does not teach a system wherein each compressor has a plurality of discrete output capacities. Alsenz '475 discloses a refrigeration system with multiple compressors 12 and 16 having discrete output capacities (column 5 lines 54-59 and column 6 lines 22-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Alsenz '119 to incorporate the on/off compressors of Alsenz '475 into the system as it well known in the art discrete capacity compressors are more cost-efficient to operate than constant capacity compressors.

Alsenz '119 further discloses a refrigeration system capable of performing the method of claims 11 and 12, as recited.

Alsenz does not teach a system wherein each multi-capacity compressor has a plurality of discrete output capacities and an operational state or a control system to generate the output capacities of each compressor. Alsenz '475 teaches a refrigeration system with compressors 12 and 16 having discrete output capacities (column 5 lines 54-59 and column 6 lines 22-25). Alsenz '475 further teaches a microprocessor controller 10 that controls the output capacity of the system compressors (column 3 lines 49-68 and column 4 lines 1-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Alsenz '119 with Alsenz '475 in order to reduce the cost in operating the refrigeration system. It is well known in the art discrete capacity compressors are more cost efficient than the constant capacity compressors.

Art Unit: 3744

With regard to claim 13 and 14 Alsensz 475 teaches a table (Figure 7) with a plurality of configurations of multi-capacity compressors. Alsensz '475 further teaches the system is capable of selecting different configurations of the multiple capacity compressors by providing different stages, each stage having compressor unloading combinations, see Figure 7.

**FIG.7**

STAGE	C <sub>1</sub>	C <sub>2</sub>	U <sub>1</sub>	U <sub>2</sub>	C <sub>3</sub>
0	0	0	0	0	0
1	1	0	0	0	0
2	1	1	0	0	0
3	1	1	1	0	0
4	1	1	1	1	0
5	1	1	1	1	1

**Figure 7 Alsensz (US 4951475)**

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alsensz '119 as modified by Alsensz '475 in further view of Shaw (US 4947655).

With regard to claim 9, Alsensz '119 as modified by Alsensz '475 teaches all limitations of claim 6, however fails to teach that the first and second reciprocating compressors 18 and 20 (column 3 lines 29-33 and column 4 lines 28-40). It would have been obvious to one of ordinary skill in the art at the time of

Art Unit: 3744

the invention to incorporate the reciprocating compressors of Shaw into the refrigeration system of Alsenz '119 in view of Alsenz '475 because reciprocating compressors advantageously the high-pressure ratios that are needed to operate refrigeration systems more efficiently.

### ***Allowable Subject Matter***

Claims 7 and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

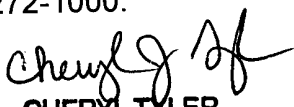
Claim 3,4,10,15, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene L. Bankhead whose telephone number is (571)-272-8963. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571)-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**CHERYL TYLER**  
**SUPERVISORY PATENT EXAMINER**

Examiner  
Art Unit 3744  
GB